



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 627 Main Street, Worcester MA 01608 • 508-792-7650

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Commissioner

May 22, 2012

Ms. Suparna Chakladar
NEO Fitchburg, Limited Partnership
5087 Junction Road
Lockport, NY 14094

RE: Westminster
Transmittal No.: X250903
Application No.: CE-12-011
Class: SM-25
FMF No.: 253957
AIR QUALITY PLAN APPROVAL

Dear Ms. Chakladar:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the operation of the backup flare at the Fitchburg Westminster landfill serving the landfill gas collection system in Section 1 and portions of Section 2, located at 101 Fitchburg Road in Westminster, Massachusetts ("Facility").

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control," regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

This open flare will serve as a backup flare to combust landfill gas collected from the Fitchburg Westminster Landfill. The flare will be utilized in the event the combustion unit at the Pinetree Power facility located on Route 31 in Westminster (3/4 miles north of the landfill) becomes inoperative (scheduled routine maintenance, malfunctions, or act of God). Originally approved as Air Quality Plan Approval TR# 109547 on August 29, 1996, this flare is now being approved to operate without hourly limitations or temperature requirements. The flare will combust landfill gases to prevent a condition of air pollution (odors). This flare design is not considered by the MassDEP to meet Best Available Control Technology (BACT) design requirements for a primary landfill gas destruction device. It is considered acceptable for its intended back up use only. **This plan approval replaces previous approval TR#109547 in its entirety.**

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1				
EU#	Description	Design Capacity	Fuel	Destruction Efficiency
1	John Zink Open Flare	60 MM Btu/hr * Flow: 2000 scfm	Primary fuel: landfill gas Secondary fuel: propane	98%

Notes *= based on heating value of approximately 400 – 500 Btu's per cubic feet.

Table 1 Key:

EU# = Emission Unit Number

MM Btu/hr = Million British Thermal Units per hour

scfm = standard cubic feet per minute

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The operation of the flare burning landfill gas will result in the release of emissions to the ambient air of the following air pollutants; particulate matter (PM), sulfur dioxide, carbon monoxide (CO) and nitrogen oxides (NOx). Small quantities of organic compounds may also be present in the landfill gas.

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2				
EU#	Air Contaminant	Emission Limit (#/MMBtu)	Emission Limit (tpy)	Operational / Production Limit
1	PM	0.050	1.3	<ul style="list-style-type: none"> • 157,680,000 scf/yr flow ^{2, 3} • Flame present at all times that the flare is in operation • Odorless flame • Colorless flame • Smokeless flame
	NO _x	0.080 ¹	2.1	
	CO	0.300	8.0	
	NMOC	0.070	1.9	
	SO ₂	0.098	2.6	
	Visible Emissions		0% opacity	

Note 1 = equivalent to 0.29 grams per brake horsepower hour

2 = consecutive 12 month time period

3 = based on 2000 scfm (flare rating) x 60 min/ hr x 1314 hrs / yr (1314 hrs is 15% of total annual hrs of 8760 hrs)

Table 2 Key:

EU# = Emission Unit Number

NO_x = Nitrogen Oxides

CO = Carbon Monoxide

SO₂ = Sulfur Dioxide

PM = Total Particulate Matter

NMOC= non methane organic compounds

TPY = tons per consecutive 12-month period

SCF/yr= standard cubic feet per year

#/MM Btu/hr = pounds per Million British Thermal Units per hour

SCFM= standard cubic feet per minute

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU#	Monitoring and Testing Requirements
1 Facility Wide	1. Total landfill gas flow to the flare shall be continuously measured and recorded.
	2. Should the annual flow of landfill gas to the backup flare exceed the annual flow allowed in Table 2, the MassDEP shall then consider the flare as a primary odor control device and require the Permittee to re-apply for approval to operate as such and meet applicable BACT flare requirements at that time.
	3. Limits noted in Table 2 shall not be exceeded during all modes of operation, including startup and shut down.
	4. The Permittee shall exercise good combustion principles in the operation of the flare to sustain a flame that is colorless, odorless, and smokeless.
	5. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	6. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13
	7. The Permittee or their designee shall be responsible for re-igniting the flare.
	8. In accordance with 310 CMR 7.04(4)(a), each fuel utilization facility shall be inspected and maintained in accordance with the manufacturer's recommendations and tested for efficient operation at least one in each calendar year. The results of said inspection, maintenance, and testing and the date upon which it was performed shall be recorded and posted conspicuously or near the permitted equipment.
	9. The Permittee shall conduct landfill gas analysis at the inlet to Pinetree on a quarterly basis for non-methane organic compounds (NMOC).

Table 3 Key:

EU# = Emission Unit Number

NMOC= non-methane organic compounds

Table 4	
EU#	Record Keeping Requirements
1	1. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	2. The Permittee shall maintain records of flow monitoring and stack testing and inlet gas analysis as required by Table 3.
	3. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) approved herein on-site.
	4. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	5. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	6. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	7. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	8. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU# = Emission Unit Number

PCD = Pollution Control Device

SOMP = Standard Operating and Maintenance Procedure

USEPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
1	1. The Permittee shall report annually to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes [under 310 CMR 7.02(2) (e), 7.03, 7.26, etc.], which did not require Plan Approval. Pursuant to 7.12(1) (a) 7, the Permittee is required to file Source Registration as a condition of this Plan Approval.
	2. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	3. The Permittee shall notify the Central Regional Office of MassDEP, BWP Permit Chief by telephone at 508-767 -2845, by email CERO.Air@Massmail.state.ma.us, or fax 508-792-7621 as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30 days from MassDEP’s request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU# = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

- A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU#	Special Terms and Conditions
1	1. Propane or natural gas shall be used for flare startups.
	2. The operation of the gas extractor system and the flare shall be operated in a manner to ensure that the release of raw untreated landfill gas to the ambient air shall not occur.
	3. The flare shall be fully operational during Pinetree Power boiler outages.
	4. A 98% minimum destruction efficiency of collected landfill gas shall be achieved from the flare.

Table 6 Key:

EU# = Emission Unit Number

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.”
- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7			
EU#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)
1	25	0.83	61

Table 7 Key:

EU# = Emission Unit Number

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and/or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Maria L'Annunziata by telephone at 508-767-2748, or in writing at the letterhead address.

*This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.*

Roseanna E. Stanley
Acting Permit Chief
Bureau of Waste Prevention

Enclosure

ecc: Westminster Board of Health
Westminster Fire Department
Fitchburg Board of Health
Fitchburg Fire Department
Fitchburg Mayor's Office
MassDEP/Boston - Yi Tian
MassDEP/CERO - Kim McCoy